



Geo  
comm

The logo features the text "Geo" in a large, white, serif font, with "comm" in a smaller, white, sans-serif font directly below it. The background is a dynamic composition of red and orange geometric shapes, including a stylized road with dashed lines that recedes into the distance. In the upper right, there is a faint, golden-yellow illustration of a city skyline and a satellite in orbit.

# Addressing and Data Synchronization for Public Safety

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Geo  
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# Agenda

- Introductions
- Addressing components
- Importance of data synchronization
- Data
- Major factors
- Pitfalls
- Conclusion

# Addressing

- Addressing – Why?
  - E9-1-1 implementation
  - Addressing systems
  - Priorities
- Maintenance
  - New concept for addressing
  - Learning process

# Technology

- Public safety technology and GIS
  - Dispatch mapping
  - Emergency notification systems
  - Address assignment
- GIS in public safety
  - Solution
  - Problems?

# Standards

- NENA – National Emergency Numbering Association <http://www.nena.org/>
- Addressing Systems – A Training Guide for 9-1-1
  - New version – Fall 2007
  - NENA Web Site
- GIS Standards
  - 02-010
- Maintenance Standards
  - July, 2007
  - 02-014

# NENA Standards

- Efficient addressing system geared toward public safety
- Easy to understand
- Must be consistent
- Easy to maintain
- Used by everyone

# Address Assignment

- Private Drives
- Sequential order
- Odd/Even designation
- Circular streets
- Cul-de-sacs
- Unique address
  - Stacked addresses
  - Multiple residences



# Private Drives

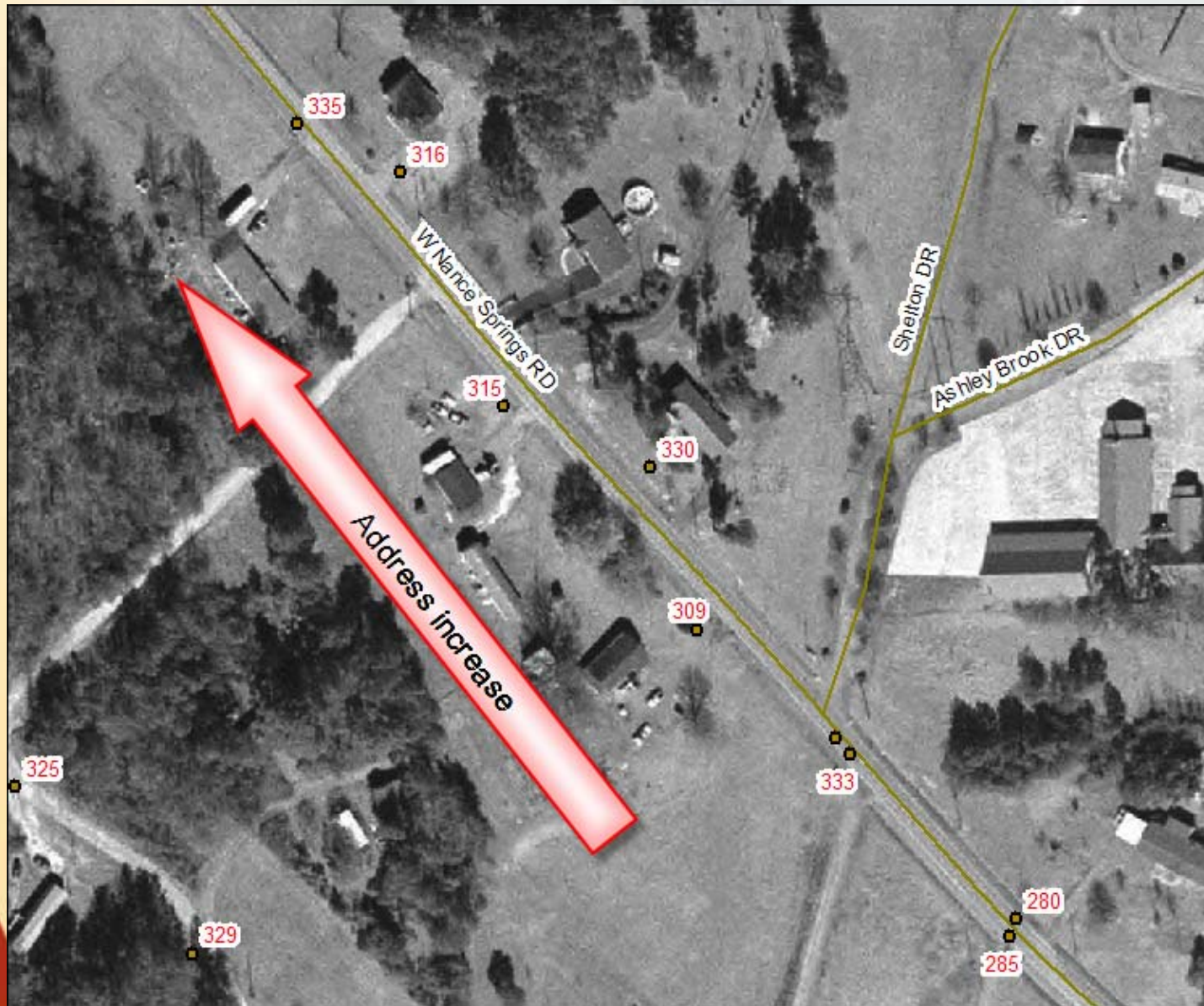
- 3 or more residences
- New road name/ranges
- Addressed off of new road



# Sequential Order

- Increase in sequential order
- Problematic for GIS
  - Anomaly file
  - Address location still issue





# Odd/Even designation

- Define an address parity
- GIS development
  - Centerline
  - Internal line direction
  - Four address fields



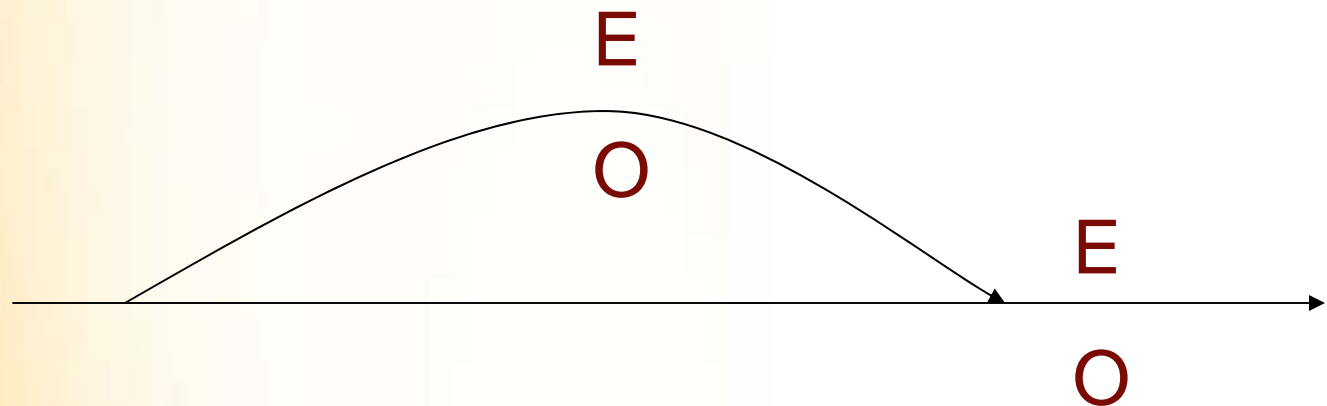


# Circular Streets

Two intersections

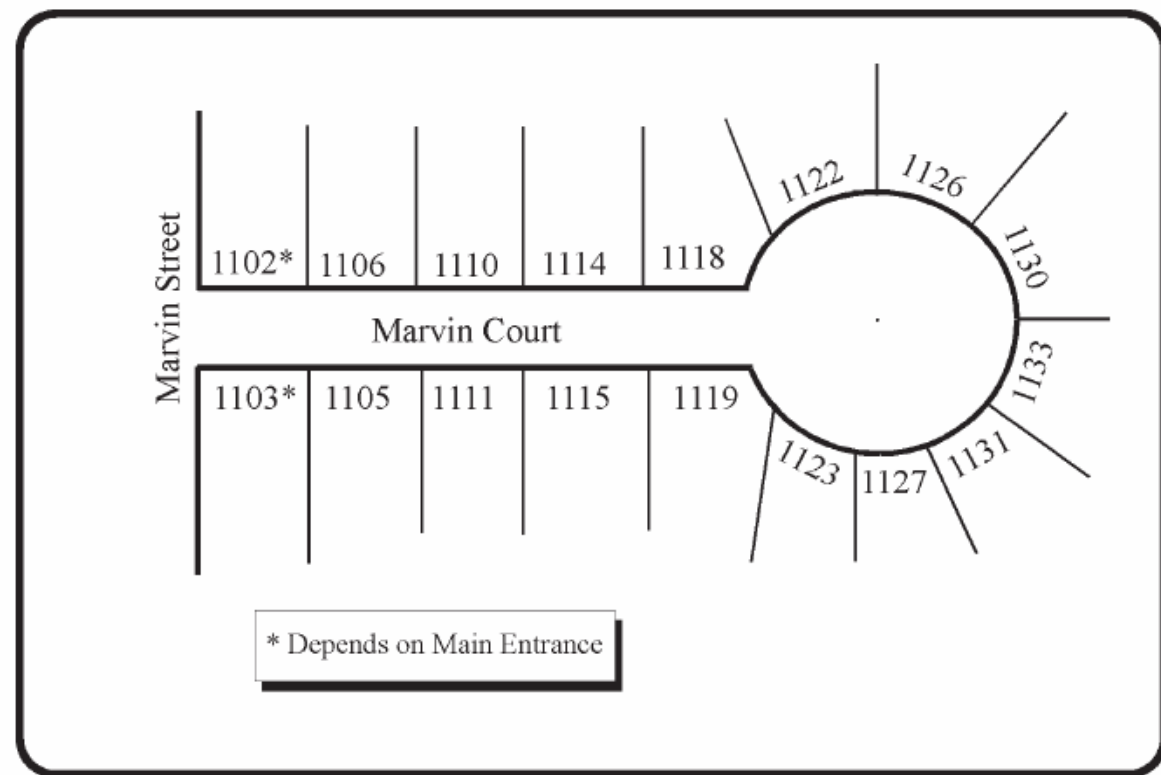
Addresses start closes to pt of  
origin

Odd even designation



# Cul de sacs

- Split down middle
- Same at the end of street
  - Imaginary line





# Unique Address

- Stacked addresses
- Multiple structures using same address
- Allow growth



# Conferences

- URISA
  - Street Smart conference
- Merged with NENA
  - Next conference - April, 2008
  - The URISA/NENA Addressing Conference

# Apts/ Duplex/Businesses

- Separate entrance – separate address
- One entrance – multiple units
  - One primary address
  - Apt #
  - Suite#

# Road Naming

Road name inventory

Designators – follow postal standards

[http://www.usps.com/ncsc/lookups/usps\\_abbreviations.html](http://www.usps.com/ncsc/lookups/usps_abbreviations.html)

CAD (Computer Aided Dispatch) specifications



# Recommendations

- Addressing ordinance
  - House number
  - Street names
  - QA/QC procedures
  - Workflow to include GIS and public safety
- Address review
- Road name inventory
- Review NENA standards



# Synchronization

# Synchronization

The relation that exists when  
things occur at the same time;  
(Wordnet)

"the drug produces an increased  
synchrony of the brain waves"

Example: New road is added to  
the map data and a new MSAG  
entry is created



# Importance of Data Synchronization

- Call plotting
- Spatial Analysis
- Maintenance
  - Software

# Data

- MSAG and ALI database
- Add map data
  - ✓ Centerline
  - ✓ ESN
  - ✓ Zip Code
  - ✓ Telco Boundary

# MSAG and ESN

- State of the MSAG
  - ✓ Clean MSAG
  - ✓ Community name
  - ✓ Synchronization with map data
- ESN breakdown table
  - ✓ Clean ESN breakdown table
  - ✓ Link to a geographic area

# Consistency

- Street names
  - ✓ Spelling errors
  - ✓ Punctuation
- Directionals
- Designators
- Review
  - ✓ Independent
  - ✓ Dependent

# Workflow

- Synchronization with other departments
  - ✓ Address assignment
  - ✓ Addressing ordinance
  - ✓ MSAG maintenance
  - ✓ Review of workflow
  - ✓ GIS development

# GIS Factors

## Development standards

- ✓ Broken at intersections
- ✓ Alignment of map layers
- ✓ Quality control procedures

## Geocoding procedures

- ✓ Location determination
- ✓ Search layers

# Software Configuration

- Maintenance/Dispatch applications
- Abbreviation tables
- Adjustments to the synchronization

# Validation Processes

- How do we verify synchronization?
- How do we interpret the results?
- Validate databases
  - ✓ Street name level
  - ✓ House number level



# Remember

- Data synchronization is a process
- Different levels of synchronization
  - ✓ Full synchronization
  - ✓ Maintenance
- Understand what is being done

# Software

- Tool
- Should enhance current processes not define them
- Clear and simple processes
- Data requirements

# Major Factors

- State of the MSAG
- ESN breakdown table
- Street name consistency
- Designator consistency
- Directionals consistency
- Workflow

# Major Factors

- GIS development standards
- Software configuration
- Geocoding procedures
- Validation processes
  - ✓ MSAG/ALI/Map
  - ✓ Street name to house number level



# Thank You

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